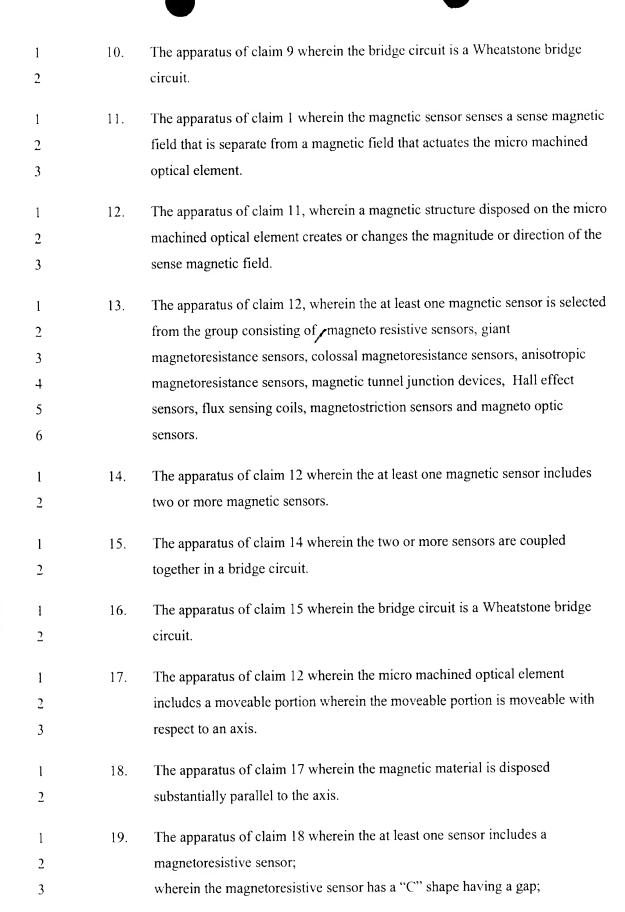
WHAT IS CLAIMED IS:

l	1.	An apparatus, comprising:	
2		a)	a micro machined optical element; and
3		b)	a magnetic sensor disposed on the micro machined optical element.
1		2.	The apparatus of claim 1 wherein the magnetic sensor senses a magnetic field
2			that is used to actuate the micro machined optical element.
1		3.	The apparatus of claim 1 wherein the micro machined optical element includes
2			a moveable portion and at least one magnetic sensor disposed on the moveable
3			portion.
4		4.	The apparatus of claim 3 wherein the at least one magnetic sensor includes a
5			sensor selected from the group consisting of magneto resistive sensors, giant
6			magnetoresistance sensors, colossal magnetoresistance sensors, anisotropic
7			magnetoresistance sensors, magnetic tunnel junction devices, Hall effect
8			sensors, flux sensing coils, magnetostriction sensors and magneto optic
9			sensors.
ì		5.	The apparatus of claim 3 wherein the micro machined optical element includes
2			a fixed portion and at least one sensor further includes one or more magnetic
3			sensors disposed on the fixed portion.
1		6.	The apparatus of claim 5 wherein the magnetic sensor disposed on the fixed
2			portion is disposed on a sidewall of the fixed portion.
l		7.	The method of claim 5 wherein the fixed portion includes a base and the
2			magnetic sensor that is disposed on the fixed portion is disposed on the base.
l		8.	The apparatus of claim 5 wherein the fixed portion includes a top chip and the
2			sensor is disposed on the top chip.
l		9.	The apparatus of claim 5 wherein the sensor that is disposed on the movable
2			portion and the sensor that is disposed on the fixed portion are electrically
3			coupled in a bridge circuit.



4		wherein, in at least one position of the moveable element, the magnetic
5		material is disposed within the gap.
6	20.	The apparatus of claim 17 wherein the magnetic material is disposed
7		substantially perpendicular to the axis.
1	21.	The apparatus of claim 20 wherein the at least one sensor includes a
2		magnetoresistive sensor;
3		wherein the magnetoresistive sensor has a "C" shape having a gap;
4	22.	The apparatus of claim 21 wherein, in at least one position of the moveable
5		element, the magnetic material is disposed within the gap.
1	23.	The apparatus of claim 12 wherein the at least one magnetic sensor includes a
2		magnetoresistive sensor characterized by a serpentine shape.
1	24.	The apparatus of claim 1, further comprising:
2		means for measuring a temperature; and
3		means for compensating for a change in the property of the at least one
4		magnetic sensor with temperature.
l	25.	The apparatus of claim 24, wherein the compensating means includes means
2		for determining a relationship between the property of the magnetic sensor and
3		the measured temperature.
1	26.	The apparatus of claim 24, wherein the compensating means includes means
2		for regulating the temperature to maintain the temperature within a desired
3		range.